

Claims :

1. A display device comprising an array of pixels (P), **characterized** in that said display device (10,20,30) comprises at least
 - a layer of substantially transparent substrate (S),
 - a pinhole mask (M) carrying an array of pinholes (H) or corresponding limiting apertures and arranged in front of said substrate (S) each pinhole (H) corresponding to a single pixel,
 - an array of electrically controllable refractive or diffractive lenses (L) or corresponding optical components arranged between said substrate (S) and said pinhole mask (M) to affect in an electrically controlled manner the divergence of the light travelling through said substrate (S) and said lenses (L) towards said pinhole mask (M).
2. The display device according to claim 1, **characterized** in that the pinholes (H) in the pinhole mask (M) are arranged to be light transmissive in order to compose a transmissive display device (10).
3. The display device according to claim 1, **characterized** in that the pinholes (H) in the pinhole mask (M) are arranged to be at least partly light reflective and the pinhole mask (M) is arranged to be at least partly light absorbing in order to compose a reflective display device (20).
4. The display device according to claim 1, **characterized** in that the pinholes (H) in the pinhole mask (M) are arranged to determine an optical path towards phosphor material (P) in order to compose a fluorescent display device (30)
5. The display device according to claim 4, **characterized** in that said display device (30) comprises several different type of phosphor materials (P) in order to compose a colour display.

6. The display device according to any of the foregoing claims, **characterized** in that the electrically controllable lenses (L) are based on the use of electrically deformable viscoelastic gel.
7. The display device according to any of the foregoing claim 1-5, **characterized** in that the electrically controllable lenses (L) are liquid crystal based switchable lenses.
8. The display device according to any of the foregoing claims, **characterized** in that the electrically controllable lenses (L) are variable focus lenses with each having two or more separate electrically selectable focus values.
9. The display device according to any of the foregoing claims, **characterized** in that the electrically controllable lenses (L) are arranged to be controlled through affecting their on-off duty cycle.
10. The display device according to any of the foregoing claims, **characterized** in that the display device (10,20,30) is a panel display for a wireless mobile station or mobile phone.